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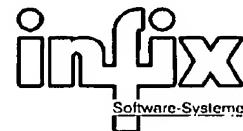
2 Amendments to the Claims

What is claimed is:

1. (Currently amended) Method for machine-executable information processing, comprising:

means to store a hierarchy of data elements, said hierarchy comprising:

a plurality of data elements each comprising a contents member being able to hold simple contents, said simple contents not comprising further said data elements,

a plurality of data elements each comprising a contents member being able to hold aggregate contents, said aggregate contents comprising a subordinate hierarchy level, said subordinate hierarchy level comprising a plurality of data elements,

a plurality of data elements each being able to have an associated functional expression optionally selectable by input means,

a plurality of said functional expressions each being able to contain a reference using dynamic binding to refer to the contents of at least one data element different from the data element associated with said functional expression;

steps to model said hierarchy of data elements by input means, comprising steps to insert a new hierarchy level and steps to insert a data element into an existing hierarchy level;

steps to manipulate said simple contents by input means;

steps to associate a functional expression with a data element by input means and steps to manipulate said functional expression by input means;

steps to output a plurality of said data elements by output means;

steps to update the contents of a plurality of said data elements associated with said functional expressions by machine-evaluating each said functional expression and updating the contents of its associated said data element to reflect the result of said functional expression.

representing information in a hierarchical data structure consisting of at least two hierarchy levels, wherein
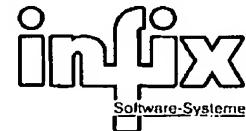
the structural configuration can be modeled by input means, in particular, by enabling the insertion of new hierarchy levels and the addition of new elements within existing hierarchy levels,

the hierarchy levels are capable of containing elements of at least two types, a) the first type of element being able to contain contents, which consist in an elementary structure, whose configuration is not modelable for the purpose of this method; and

b) the second type of element being able to contain contents, which consist in an aggregate structure, which constitutes a hierarchy level subordinate to the corresponding element,

a sub-hierarchy can be added subordinate to an existing hierarchy level, and the contents of at least one element can be manipulated by input means, and the contents of at least one other element can be determined by machine-evaluating an expression, which can be manipulated by input means, said expression being able to contain a reference using dynamic binding to refer to at least one other element.

2. (Canceled)

3. (Currently amended) Method according to claim 1, wherein <u>said hierarchy of data elements is an object hierarchy and the method further comprises means to store, model and output a hierarchy of classes, each class being associated with a plurality of said data elements and said class comprising a specification of the common configuration and properties of a plurality of said data elements separately from said data elements' individual contents.</u>
modeling is carried out in an object-oriented way, by having a class structure represent the configuration and properties of a number of aggregate structures of the same kind separately from their individual contents.

4. (Currently amended) Method according to claim 1, <u>further comprising steps to select different output and editing modes for data elements depending on parameters, and steps to manipulate said parameters</u> wherein parameters for the elements' representation and editing modes are manipulatable by input means.

5. (Original) Method according to claim 4, wherein multiple sets of parameters may exist per element with one of said parameters sets becoming effectual depending on the results of manipulatable expressions.

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6. (Previously presented) Method according to claim 1, wherein all information, including meta information, is stored persistently, particularly in an object-oriented or relational database.

7. (Currently amended) Method according to claim 1, wherein the expression evaluation is carried out in an optimized way by
   a) marking the result of an expression invalid if, and only if the expression was modified or the contents of an element referenced by the expression were modified or became invalid and
   b) updating the result on an expression not until it is needed for <u>output</u> representation or in the course of computing another result.

8. (Previously presented) Method according to claim 1, wherein the system architecture allows for a distribution of functions, which enables separate processing for
   a) visualization and editing of information and meta information,
   b) serving information and meta information, in particular for purposes of visualization and editing or for input and output directed at external systems,
   c) parallel evaluation of expressions by means of any number of processors.

9. (Previously presented) Method according to claim 1, wherein the expression evaluation can be extended with external (user-defined) functions.

10. (Previously presented) Method according to claim 1, wherein upon request an external process is notified about changes or invalidations of selectable structure components.

11. (Canceled)

12. (Previously presented) System, which is configured to be capable of executing a method according to claim 1.

13. (Previously presented) Method according to claim 1, wherein the machine-evaluable expression can return contents in the form of an aggregate structure.

14. (Previously presented) Software product containing components, which execute in conjunction with hardware a method according to any one of claims 1, 3 to 10, or 13.